

Project Leader's Report

July - 2003



USDA Forest Service - Southern Research Station - 320 Green Street Athens GA 30602 - <http://www.srs.fs.usda.gov/disturbance>



DMISE
DISTURBANCE MANAGEMENT
IN SOUTHERN ECOSYSTEMS

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Outreach Activities:

Four organized groups with a total of 40 people visited the Brender Forest during the month of July. These groups included Boy Scout Troop 170 from Macon; an Interagency Planning Team of southern wood producers, Georgia Extension Service, Georgia Forestry Commission and private contractors; Mercer University Environmental Science Lab; and an appreciation luncheon for Senior Community Service Employee Program enrollees.

Approximately 34 visitors came by the office at the Brender Forest for information and 22 people signed the register at the Hitchiti Interpretive Trail.

Technology Transfer:

- The unit hosted a meeting in Athens to discuss application to the South of the Spatial Resources Support System (SpaRSS) used to allocate National Fire Plan fuel treatment funding. Jamie Barbour, Program Manager for Focused Science Delivery Programs at the Pacific Northwest Research Station, and Ron McRoberts, scientist with the North Central Forest Inventory and Analysis Program, explained the origin and application of SpaRSS. One limitation of the way it has been applied so far is the focus on thinning as a fuel reduction treatment in overstocked stands, which does not address the major fuel problems in the South. Further discussions are planned between unit scientists, fuels managers from Region 8, and Barbour. Attending the meeting from Region 8 were John Caffin, Bill Clerke, and Renee Jacokes; Mike Wimberly, University of Georgia, also attended.

- John Stanturf hosted a stakeholders meeting for the Wildland Urban

Interface characterization project with Mike Wimberly, University of Georgia. The purpose of the meeting was to obtain mid-course feedback (a reality check) from managers on the direction and results to date. Wimberly and grad student Yangjian Zhang presented an overview of the project and some results, including a Wildland Urban Interface Index developed from readily available spatial databases. The importance of temporal change was emphasized in the discussion; knowing where the WUI will be in the future is an important question. Fire managers need detailed information about location of structures, which is not readily available from existing data such as census blocks in rural areas. Several ideas and offers of assistance for further research into aspects of these questions came forward at the meeting. In addition to unit staff attending the meeting were Alan Dozier, Georgia Forestry Commission; Jim Paul, fire consultant; Dean Gettinger, National Park Service GIS specialist; John Caffin,

Current Highlights

- WUI stakeholders meeting - page 1
- Over \$120,000 in new funding - see page 4
- Duck Tape in the news - see page 6
- Six new publications - see page 7
- Kennard studies prescribed burning in Bolivia for BOLFOR. O'Brien assesses fire management needs in Dominican parks for TNC - see page 2 pictures on page 9



Bill Sweet, and Renee Jacokes, Region 8.

- Gary Achtemeier met with Fish and Wildlife Service (FWS) personnel David Brownlie, Carl Schmidt, Fred Wetzel, and Dean Metteauer to tell them about the Southern High-Resolution Modeling Consortium (SHRMC) and to present a progress report on an analysis of burn and smoke data from the Piedmont NWR they provided to validate the PB-Piedmont smoke model. The FWS will prepare an inter-agency agreement to formalize cooperation between the smoke management team and FWS managers over the South, including funding for hands-on testing and operation of the PB-Piedmont model by PNWR personnel.

- Mac Callaham attended the 10th North American Forest Soils Conference, Sault Ste. Marie, Ontario, Canada, July 20-24, and presented posters: Callaham, M. A., Jr., T. A. Waldrop, J. A. Stanturf, and J. R. Butnor. 2003. "Fuel reduction treatment effects on soil respiration in Piedmont loblolly pine forests" and Stanturf, J. A., D. L. Bland, M. A. Callaham, S. Schoenholtz, and J. R. Butnor. 2003. "Short-term soil and fine root response to fertigation of four clones of eastern cottonwood (*Populus deltoides* (Bartr.) ex. Marsh)."

- Stanturf will attend the IUFRO meeting in Freiburg, Germany on "The Question of Conversion of Coniferous Forests," September 28-October 3. He will present a paper on "It's Not Just Semantics: Why Clear Communication Matters." The issue of terminology is important and often neglected, according to conference organizer Jörg Hansen: "The Scientific Board very much appreciated your thoughts on the importance of both terminology and

communication problems. Albeit often neglected, this subject is also of topical interest for conversion, which is why the RPC-Conforest included a dedicated working group addressing similar issues." Abstracts will be published in the conference background material and after the conference as one book of the series "Freiburger Forstliche Forschung: Berichte."

- Tom Waldrop is initiating a cooperative agreement for a development project with J.A. Allen at Clemson University, "Near Real Time Delivery of Imagery Data from Airborne Platforms for Firefighting Applications" with \$51,892 in funding provided by Region 8. The objective of the project is to evaluate commercially available products and services that will enhance current firefighting capability. The project will demonstrate the utility of a commercial off-the-shelf application that can provide an incident commander with accurate and timely information on fire boundaries and hot spots using thermal infrared imagery.



- Deb Kennard spent several weeks in southeastern Bolivia assessing the potential for using prescribed burning to manage commercial tree species in seasonally deciduous forests. The trip was partially funded by BOLFOR, a USAID-funded sustainable forest management project. Re-measuring plots six years after small-scale experimental burns confirmed that high intensity fires dramatically improved regeneration success. However, results of management-scale prescribed burns were

mixed, due to the patchiness of burns. To improve burning prescriptions, BOLFOR is conducting a large-scale experimental burn this August.

- Joe O'Brien traveled to the Dominican Republic, July 6-15, to assess needs for fire research and management in Dominican parks and protected areas. The trip was organized and sponsored by The Nature Conservancy (TNC), USDA FAS, USAID and the Fundacion Moscoso Puello, a Dominican NGO. His group included Ron Myers, Senior Fire Ecologist for Latin America and the Caribbean for TNC; Carlos Garcia, Director of Fundacion Moscoso Puello; Jeffrey Miller, Regional Forestry and Environmental Advisor for USAID; and various Dominican forestry officials. On July 8, they met with Ing. Maximo Aquino, Sub-secretary of Forest Resources and Roberto Sanchez P., Sub-secretary of Environment and Natural Resources. They were given background on the history of Dominican protected areas and the government's concerns pertaining to fire management. They visited several parks in the Cordillera Central and the Bahoruco Mountains, spending several days in the field camping and visiting field stations. Forest cover ranged from cactus-thorn scrub, through dry tropical forest, broadleaf cloud forests and *Pinus occidentalis* forests at high elevations. Many forests were in various stages of recovery from extensive clearcutting in the 50s and 60s, or recent wildfires. There was a mix of fire dependent and fire sensitive forest types, and USAID has begun equipping forest fire brigades made up of small groups of campesinos living near the parks. FMP, USAID and others are educating locals on both the positive and negative effects of fire. One of the major sources of wildfire ignitions

Meetings / Reports :

in the parks is escaped agricultural fires set by people from surrounding communities. The group also visited parks bordering Haiti and realized the need for cross-border park development and reforestation programs. They agreed to meet again for a more detailed workshop next year to organize research and management goals for the country.

- An Interagency Team located at the National Interagency Fire Center in Boise, Idaho has asked Scott Goodrick to help with the weather analysis input needed to develop the Preparedness Module of the Fire Program Analysis System. The outcome of this project will be an analysis used for developing Initial Attack budget requests based on an optimal organization in meeting land management objectives.

- John Stanturf has been invited to appear on Timber Talk, a radio program about forestry that airs on several stations in Arkansas. The show will focus on his recent article in the Journal of Forestry "Productivity of Southern Pine Plantations, Where Are We and How Did We Get Here?" as well as his viewpoints surrounding this issue. The show consists of a telephone interview conducted by host and consulting forester Teddy Reynolds of Reynolds Forestry Consulting in Magnolia, Arkansas. Reynolds received Outstanding Communicator of the Year in 2001 and recently was chosen Forester of the Year by the Arkansas Timber Producers Association.

- Stanturf will attend the Forest Service Research Advisory Committee (FSRAC) meeting in Philadelphia in August as the Southern Station representative. The group will meet with the Forest Service Research Executive Team.

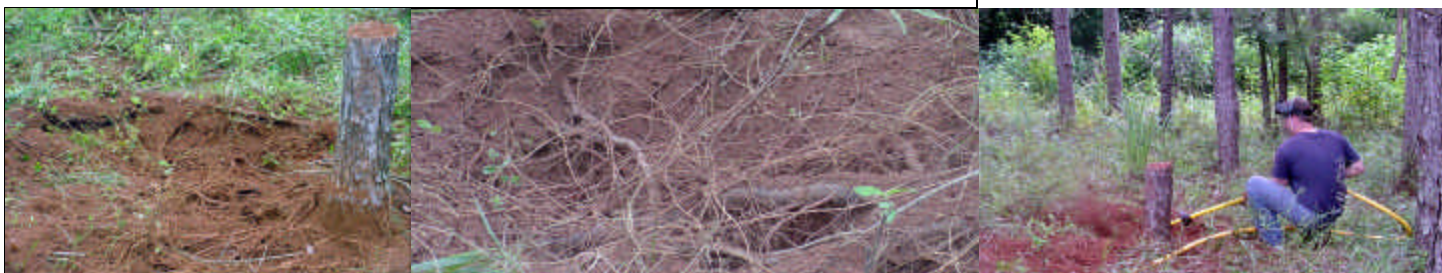
- Tom Waldrop met with John Caffin of Region 8 Fire and Aviation on July 1 and with Scott Terry of SpectroTech, Inc. on July 22 to discuss plans for a new project involving hyperspectral imaging (see page 2). Region 8 will provide the necessary funding and aircraft while Scott Terry and Waldrop will collaborate with the Clemson University Strom Thurmond Institute on data analysis and publication.

- The Southern Appalachian and Piedmont team is continuing its work on the National Fire and Fire Surrogate Study. Fieldwork for vegetation and fuels was completed on the Southeastern Piedmont Site in early July. The team is now working at the Southern Appalachian site and is expected to continue there through August. Ross Phillips completed GIS animations of fire behavior for the Appalachian site that will provide site-specific information on fire intensity and residence time. These variables will be used to examine the impacts of fire of differing intensities on vegetative and soil properties. These animations will be available soon on the web site for the Southern Appalachian study site (http://www.srs.fs.usda.gov/ffs_gr/).

- Mac Callahan and Corey Babb visited with Paul Hanson at Oak Ridge National Lab to discuss research using leaf litter labeled with radioactive isotopes to track the movement of carbon through soil by earthworms, to be conducted as part of Corey's Master's thesis project and funded in part by ORNL. They selected some likely sites, and fieldwork for the project is set to begin in September.

- Joe O'Brien met with Jason Drake and planned a study of the effectiveness of LIDAR as a fuel-mapping tool, especially for aerial fuel. Jason possesses, and would like to share data from, a 2002 LIDAR flight over Leon County, Florida, including part of Apalachicola National Forest and Tall Timbers Research Station. Joe and Jason worked together in Costa Rica and also agreed to explore collaborative research in the Dominican Republic.

- The unit acquired a new tool for excavating tree root systems. The Air Spade (Concept Engineering Group, Verona, PA) uses compressed air to blow soil away from root systems. Immediate uses are in studies of cottonwood plantations, to obtain better estimates of belowground productivity and carbon sequestration (contact John Stanturf), and in the longleaf root mortality study at Eglin AFB (contact Joe O'Brien). Dexter Bland demonstrated the tool on a small pine tree at Whitehall for staff from all the units in Athens.



Funding :

- Alex Clark was awarded a Southern Research Station Agenda 2020 grant for a cooperative study with the University of Florida entitled "Secondary xylem form and function: linkage among wood quality, growth and tree water." Clark will be cooperating with Tim Martin and Gary Peter to determine whether the latewood:earlywood ratio of different pine genotypes can be predicted by foliar discrimination against ^{13}C , to determine the role of water availability/drought in initiating latewood formation, and to determine the relationship between growth and changes in foliar ^{13}C . The Agenda



Tim Martin and Gary Peter

2020 grant was for \$150,000 over three years (\$50,000 annually).

- John Stanturf has received \$20,000 funding from the National Park Service to begin a multiyear project to develop landscape and finer-scale ecological mapping in the Sonoran Desert. Dave Cleland will be the Principal Investigator on the work.
- Tom Waldrop has received \$51,892 from Region 8 to fund a hyperspectral project (see page 2).
- Yong Liu submitted a proposal to the NOAA Climate and Global Change Program for Federal Agencies and Federal Joint Institutes, "Coupled spatial patterns of soil moisture and precipitation in the NCEP regional re-analysis and application to seasonal precipitation prediction." Funding requested for the three-year proposed project is \$211,077. The objective of the study would be to better understand the anomalous conditions under which soil

moisture predominates over large-scale atmospheric circulation in determining seasonal precipitation, in order to improve seasonal precipitation predictions.

Visitors :

- Timothy S. Jeppsen, Technical Sales Representative for Campbell Scientific, Inc. visited the lab to discuss new products and answer questions about Campbell data loggers, data acquisition systems, and sensors for research and industry. Staff from SRS-4104 and SRS-4154 met with him and Timothy provided resource CDs with product information, reference materials, and software.

Personnel News :

- Dr. David Cleland, Research Liaison for Region 9, National Forest System, has been appointed to a half-time detail to the unit for the next three years. A landscape ecologist, Cleland specializes in GIS and remote sensing applications to landscape classification.



- On July 27, Bryan Bulger joined the unit in Andalusia, AL as a GS-4 Forestry Technician. Bryan has a BS in Horticulture from Auburn University, is from the Andalusia area, and is familiar with the Dixon Center and the surrounding forest. He will be working with David Jones collecting data from the Gulf Coastal Plains Site of the National Fire and Fire Surrogate Study.

- The Southern Appalachian and Piedmont team welcomed a new employee on July 28. Lucy Brudnak



accepted a position as Biological Science Technician to work on the team's hyperspectral imaging projects. Lucy recently completed her M.S. in Natural Resources from the University of Illinois at Urbana-Champaign. She worked with nutrient cycling differences in ecosystems across seral stages in the Smoky Mountains. In her new job, Lucy will lead the field crew to collect data for developing and validating fuel models for the Southern Appalachian Mountains. She says she loves fieldwork and is anxious to spend more time in the mountains. Welcome Lucy!

- Students leaving the unit include Steve Ritter, Jason Haray, Jeff Tyler and Daniel Martin in Athens; and Stephanie Hequemborg, Chuck Harrell, Laura Zebeahy, Seth Tiffner in Clemson.
- Welcome to Tyler Clemons from the University of Georgia, a new student working with Alex Clark.
- Shane Welch, Biological Technician in Clemson, will be leaving mid-August.
- On September 9, 2003, the Exercise Science Department of the University of Georgia will offer a Wellness Assessment Program, in the NBCR from 9:00 AM until 11:30 AM. Several services will be offered including, percent body fat, grip strength, flexibility, and cardiovascular endurance.
- Cynthia Fowler, Joe O'Brien, and Tom Philipps attended a Prescribed Fire Manager Training Course on July 17 in Rome, Georgia. The Georgia Forestry Commission organized the training session.

News from around the Region :

• The Forest Genetics Working Group of the North American Forest Commission has completed the “North American Directory of Forest Geneticists Interested in Providing Study or Training Opportunities in Forest Genetics and Related Disciplines.” The directory is organized alphabetically by research interest and by organization. It is now available online at <http://www.fs.fed.us/global/nafc/genetics/2003/directory/welcome.htm>. News of other activities from the Forest Genetics Working Group, including a report from their last meeting in November 2002, is available online at <http://www.fs.fed.us/global/nafc/genetics/activities.htm>. Their next meeting will be held in Quebec City just prior to the World Forestry Congress (September 18-21, 2003). For more information on the latest activities of the North American Forest Commission, visit <http://www.fs.fed.us/global/nafc/>.

• Hilda Diaz-Soltero has been appointed USDA Invasive Species Programs Coordinator. The Department created this position to coordinate the USDA invasive species efforts among its agencies, as well as with the National Invasive Species Council, other federal and state agencies, organizations and private landowners. Invasive species is one of the Four Threats that the Forest Service has committed to address in the coming years.

• Jimmy Reaves, Director of the Vegetation Management and Protection Research Staff, will fill the position of Director, Pacific Southwest Research Station on an interim basis. Jimmy was once a project leader and Assistant Director in the Southern Station.

• Michael T. Goergen Jr. has been appointed executive vice-president and chief executive officer of the Society of American Foresters (SAF). Goergen had been holding the position on an interim status since his predecessor, William H. Banzhaf, departed on December 31. The executive vice-president serves as SAF’s chief executive officer, responsible to the SAF Council, the organization’s governing body. The Society of American Foresters represents the profession of forestry through accreditation of university forestry curricula, certification of forestry professionals, continuing education, positions on forest policy, public communications, member leadership development, and the publication of five peer-reviewed scientific journals and one newspaper. The organization has 17,000 members, 33 state or multi-state societies, and 250 local chapters. Before serving SAF as its interim executive vice-president and CEO, Goergen was senior director of policy and programs (2001-02), director of forest policy (1999-2001), associate director of government affairs (1998-99), and Congressional liaison (1996-97). Goergen joined SAF in 1996 after earning a master’s in forestry, policy, and administration from the State University of New York College of Environmental Science and Forestry-Syracuse. He holds a BS in environmental studies, policy, and management from SUNY CESF.

• Sam Foster resigned as Dean of the College of Forest Resources, Mississippi State University. This is the second forestry Dean who has left Mississippi State prematurely in the last six years. Foster will be on administrative leave until December 31, 2003.

• The FIA Unit is in the news. The Chief has agreed to a deputy-level review of the Forest Inventory and Analysis program in the South. Fred Allen, former State Forester of Georgia, will facilitate the review. Robert Lewis appointed Associate Deputy Chief Bov Eav to lead the team and to draft a charter, propose team membership, and develop a review process. Lewis set a deadline of November 15, 2003, to complete the review and make recommendations. After the unit held a TAV, Project Leader Jim Perdue stepped down; Assistant Director John Kelley is filling in as Acting PL.

• The Piedmont-South Atlantic Coast Cooperative Ecosystem Studies Unit has been approved. The University of Georgia is the lead university on this CESU and the Forest Service is a Federal agency member. Forest Service research units can conduct cooperative research with members of the CESU through the normal cooperative agreement mechanism and as such, there is no university overhead charged to the agreement.

GPRA Accomplishments:

Category	FY 2002 Total	FY 2003 To Date
Number of Refereed Journal Publications	9	18
Number of Non-Refereed Publications (include abstracts)	53	28
Number of Publications (refereed + non-refereed)	62	46
Number of Tours	46	65
Number of Short Courses/Training	8	8
Number of Invited Presentations to Scientific Organizations	6	7
Number of Invited Presentations to Lay Organizations	25	45
Volunteer Presentations to Scientific Organizations (non-GPRA)	28	24
Number of Technology Transfer Activities (other than above)	172	125
Outside Funding	\$3,227,500	\$1,955,455

- Wildfire risk is prompting insurance companies and communities in the West to take action. Before the recent spate of high-intensity wildfires in the West — most notably, Colorado’s Hayman fire and the Rodeo-Chediski fire in Arizona — neither insurance providers nor town councils gave much thought to the risk of wildfire to homeowners. The big wildfires of the past few years have left big insurance losses in their wake. The Hayman fire burned 133 homes and cost insurance companies \$38.7 million, accounting for more than half of the state’s \$70.3 million in total insured losses for last summer’s wildfires. Those fires burned 1,008 structures — 384 homes and 624 other buildings, such as sheds and cabins. The Rodeo-Chediski fire, which scorched 470,000 acres and destroyed 491 homes in Arizona last June, cost insurance companies \$120 million, and New Mexico’s Cerro Grande Fire, which tore through the Los Alamos area in 2000, cost approximately \$140 million in insured damages. State Farm recently launched a multi-state program aimed at reducing the risk of property loss at the wildland-urban interface. The company is conducting assessments of 21,000 homes in high-risk areas in Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming to determine their susceptibility to fire. Homeowners will have up to two years to clear brush around their houses and space trees at least 10 feet apart. At the same time, an increasing number of communities are making mitigation mandatory. In New Mexico, Santa Fe County adopted the state’s first Urban Wildland Interface code in 2001, and other communities are following suit under the state’s “20 Community Strategy,” aimed at reducing wildfire risk in the state’s most at-risk communities. Gallatin County in



Backfires set by firefighters ahead of the “Rodeo-Chediski” fire are designed to stop its advance by robbing it of the dry tinder that has fueled it.

Montana has begun charging a “fire impact fee” for subdivisions built in wildfire-prone areas. The Forest Service’s database of state and local wildfire mitigation programs lists over 164 initiatives in 20 states.

- The United States is not the only country fighting wildfires this summer. An estimated 290 fires were burning at the beginning of August in British Columbia, although most of the blazes were small. Western Canada is struggling with one of the driest summers in several years and fire officials have warned that British Columbia’s mountains are dryer than in 1998 and 1985 — considered the province’s two worst fire seasons in recent history. One fire had grown to 6,000 acres and forced officials to close a major highway. It disrupted operations

on Canadian National Railway’s mainline and knocked out a B.C. Hydro transmission line. In Portugal, there have been 1,700 forest fires so far this year, destroying more than 26,000 hectares of brush and trees. Fires have destroyed 2.5 millions hectares of land since 1971 in Portugal. At the beginning of August, a giant blaze in the north — Portugal’s largest in over two decades — was brought under control after it destroyed over 11,000 hectares of forest. Nine people have been killed in the worst wave of forest fires in recent history. Fires were also raging in parts of southern and central Spain, where temperatures of more than 104° F were blamed for the deaths of at least seven people in recent days. In France, fires, which killed five people last week, have been extinguished. The latest information on the wildfire situation in the U.S. is available at the website of the National Interagency Fire Center, www.nifc.gov. (Sources: Reuters, AP)

- Tiny Wasilla, Alaska has supplanted the South as the center of Duct Tape Culture. The 5,469 residents of Wasilla purchased more than 325 miles of duct tape in 2002 to lead the nation and earn the distinction of 2003 Honorary Duct Tape Capital of the World. Wasilla residents use it for sealing fish coolers and insulating their faces against the cold weather. They use so much duct tape that last year they purchased 314 feet of duct tape per person. Duct tape celebrated its 60th anniversary in 2002. A division of Johnson & Johnson invented the versatile tape in 1942 during World War II to waterproof artillery boxes. It was originally produced in military green, and called “duck tape” because water flowed off it like “water off a duck’s back.” (Source: Businesswire)

Publications :

FY 2003 (* denotes new publication this month)

- ***Callahan, M.A., Jr.**, J.M. Blair, T.C. Todd, D.J. Kitchen, and M.R. Whiles. 2003. Macroinvertebrates in North American tallgrass prairie soils: Effects of fire, mowing, and fertilization on density and biomass. *Soil Biology and Biochemistry* 35:1079-1093.
- ***Crider, Kimberly**. 2003. Effects of pine-hardwood management practices on forest regeneration and woody species diversity at the Savannah River site, South Carolina, USA. MS Thesis, University of Tennessee, Knoxville, TN. 106p.
- Escalante Fernandez, R. Monreal Rangel, S., **Stanturf, J.**, Arseneau, C., Nantel, P. 2002. Forest plantations in North America. Report to the North American Forestry Commission. 26 pp.
- ***Fowler, Cynthia**. 2003. Human health impacts of forest fires in the southern United States: A literature review. *Journal of Ecological Anthropology* 7: 39-63.
- Glitzenstein, J.S., Streng, D.R., and **Wade, D.D.** 2003. Fire frequency effects on longleaf pine (*Pinus palustris* P. Miller) vegetation in South Carolina and Northeast Florida, USA. *Natural Areas Journal* 23:22-37.
- ***Goodrick, S.L.** 2002. Modification of the Fosberg fire weather index to include drought. *International Journal of Wildland Fire* 11: 205-211.
- Hanula, J.L., **Wade, D.D.** 2003. Influence of long-term dormant-season burning and fire exclusion on ground-dwelling arthropod populations in longleaf pine flatwoods ecosystems. *Forest Ecology and Management* 175 (1-3): 163-184.
- Kennard, D.K., Outcalt, K.**, and M. Carrington. 2002. *Serenoa repens* (Bartr.) Small saw palmetto. In: J.K. Francis (ed.) Wildland shrubs of the United States and its territories. Gen. Tech. Rep. IITF-WB-1. Published on website www.fs.fed.us/global/iitf/wildland_shrubs.htm. 3 p.
- ***Leach, A.D.** 2003. Influence of microsite and salvage logging on post-windthrow recovery in three southeastern U.S. forests. MS Thesis, University of Georgia, Athens, GA. 151 p.
- Lockaby, B.G., Keeland, B.D., **Stanturf, J.A.**, Rice, M.D., Hodges, G., Governo, R.M. 2002. Arthropods in decomposing wood of the Atchafalaya River Basin. *Southeastern Naturalist* 1(4): 339-352.
- Miller, S.R. and **Wade, D.** 2003. Re-introducing fire at the urban/wild-land interface: planning for success. *Forestry* 76(2): 253-260.
- Moody, J.M.** 2002. Fire and alternative fuel treatment effect on soil Nitrogen: A case study of Myakka River State Park. M.Sc. thesis, FL A&M Univ., Tall., FL. 52 p.
- ***Outcalt, K.W., Paladino Correa de Lima, J.**, Americo de Melho Filho, J. Mortalidade em florestas de *Pinus palustris* cauda por tempestade de raios [Forest mortality from lightning strikes in *Pinus palustris*]. *Floresta e Ambiente* 9(1): 181-185.
- ***Paladino Correa de Lima, J.**, and McDaniel, J. 2002. A concession system for public forests in "Mata Atlantica" dominium, Brazil. *Floresta e Ambiente* 9(1): 176-180.
- Rideout, S.** and Oswald, B.P. 2002. Effects of prescribed burning on vegetation and fuel loading in three east Texas state parks. *Texas J. Science* 54(3): 211-226.
- Rideout, S.**, Oswald, B.P., and Legg, M.H. 2003. Ecological, political and social challenges of prescribed fire restoration in east Texas pineywoods ecosystems: a case study. *Forestry* 76(2): 261-269.
- Rideout, S.**, Rickard, J.K., and **Wade, D.D.** 2003. Preliminary response of herbaceous plants to biennial burning cycles applied at different dates during the growing season. *Natural Areas Journal* 23(1): 38-42.
- Stanturf, J.A.**, Gardiner, E. S., and Warren, M. L., Jr. 2003. Restoring forested wetland ecosystems. P. 193-220 (Chapter 9) In Holland, M. M, Blood, E. R., and Shaffer, L. R. Achieving sustainable freshwater systems. Island Press, Washington.
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- ***Stanturf, J.A.**, Rummer, R., Wimberly, M., Rials, T., Araman, P., Busby, R., Granskog, J., and Groom, L. 2003. Developing an integrated system for mechanical reduction of fuel loads at the wildland/urban interface in the southern United States. P. 135-138 In Iwarsson-Wide, M. and Hallberg, I., editors, Proceedings from Forest Engineering Conference: Posters Techniques and Methods. Arbetsrapport från Skogforsk Nr. 539. Uppsala, Sweden: Skogforsk-The Forestry Research Institute of Sweden.
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Upcoming Events :

2003		*Oct 7-9	Management Team Meeting, SRS; Huntsville, AL
Aug 4-8	Ecological Society America annual meeting, Savannah, GA; Leach to attend and present paper	Oct 14-21	International Conference on ECO-RESTORATION, Dehradun and New Delhi, INDIA.
Aug 11-14	IUFRO Working Group for Seed Physiology and Technology conference to be held at the Georgia Center, Athens, GA.	Oct 25-29	Society American Foresters Annual Meeting, Buffalo, NY
Sep 7-10	Council on Forest Engineering annual meeting, Bar Harbor, ME; http://www.forest-resources.umaine.edu/nercofe/cofe2003.htm	Nov 2-6	Soil Science Society of America annual meeting, Denver, CO
Sep 16-18	IUFRO Conference on 'Strong Winds and Trees: ecology and management, sponsored by WP 8.08.02 and University of Karlsruhe, Germany; re-scheduled from Aug 17-24 in Zurich; http://www.ifh.uni-Karlsruhe.de/ifh/science/aerodyn/windconf.htm .	Nov 3-7	Invasive Plants in Natural and Managed Systems: Linking Science and Management and 7th International Conference on the Ecology and Management of Alien Plant Invasions, Ft. Lauderdale, FL http://esa.org/ipinams-mapi7/abstractcall.htm
Sep 18	Agroforestry and Wildlife Field Day, Griffin, GA	Nov 4-6	SAMAB Fall Conference, Asheville, NC. http://samab.org/Conf/Conf03/conf03.html
Sep 21-28	12 th World Forestry Congress, Quebec City, Canada; http://www.wfc2003.org ; Stanturf to attend.	Nov 16-19	National Fire Risk Assessment Conference, Portland, OR.
Sep 28-Oct 2	The Question Of Conversion of Coniferous Forests meeting, Freiburg, Germany; contact for further information: instww@uni-freiburg.de	Nov 16-20	Second International Congress On Wildland Fire Ecology And Fire Management, in conjunction with the Fifth Symposium on Fire and Forest Meteorology. http://www.ametsoc.org
October 27-30	Annual Entomological Society of America Symposium in Cincinnati, OH. Callahan invited to give presentation.	Nov 19-22	Society for Ecological Restoration 15 th International Conference, Austin, TX (note new dates). http://www.ser.org
Oct 2-3	Enhancing the Southern Appalachian Forest Resource symposium, Kanuga Conference Center, Hendersonville, NC. Rideout to Present. http://www.ces.ncsu.edu/nreos/forest/feop/symposium	Nov 27-Dec 5	IEA Short Rotation Bioenergy (Task 30) meeting, New Zealand and Australia http://www.shortrotationcrops.com/events.htm
Oct 4-8	3rd International Wildland Fire Conference, sponsored by the North American Forest Commission's Fire Management Working Group, Sydney, Australia. Achtemeier to attend. http://www.wildlandfire03.com	Nov 24-26	Introduction of broadleaf species for sustainable forest management, international conference sponsored by SUSTMAN project at the University of Ulm; to be held in Reissensburg, Germany, http://www.sustman.de
		*Dec 8-10	Bioenergy Australia 2003, Sydney; Stanturf to present paper

"The time is always right to do what is right."

—Martin Luther King

"Let your hook be always cast. In the stream where you least expect it, there will be a fish."

—Ovid

2004

- Feb 2-3** 2nd Annual Western Gulf Forest Soils Tour, Alexandria, LA
- Mar 2-4** Southern Research Station All Scientists Meeting
- Mar 17-19** 14th Central Hardwood Forest Conference, Wooster, OH. <http://www.oardc.ohio-state.edu/chfc2004/>
- Jun 21-25** IUFRO Division 1 - Silviculture Conference, CIRADForest, in Montpellier, France.
- Jun 27-Jul 2** First Agroforestry World Congress, Orlando, FL <http://conference.ifas.ufl.edu/wca/#background>
- Jul 25-31** 7th INTECOL International Wetlands Conference, Utrecht, The Netherlands. <http://www.bio.uu.nl/INTECOL>
- Aug** Society for Ecological Restoration 16th International Conference, Victoria, British Columbia.
- *Aug 15-20** Large-Scale Experiments for Sustainable Forestry: Balancing Ecosystem Values; International IUFRO Workshop, Portland, OR *contact Charley Peterson: cepeter@fs.fed.us*
- Sep 3-7** European Forest Institute (EFI) Annual Meeting, Bangor, Wales (UK).
- Sep 12-16** IUFRO Conference Regenerating Mountain Forests, Kloster Seeon, Bavaria, Germany; http://www.forst.tu-muenchen.de/events/rmf2004/index_en.html
- Oct 31-Nov 3** Soil Science Society of America Annual Meeting, Seattle, WA.
- Nov 17-25** IUCN Third World Conservation Congress (WCC), Bangkok.
- Nov 7-11** Short Rotation Woody Crops Operations Working Group Biennial Meeting, Charleston, SC

*Nov 24-26

Introduction of broadleaf species for sustainable forest management, international conference sponsored by SUSTMAN project at the University of Ulm; to be held in Reims, Germany, <http://www.sustman.de>

2005

- Aug 8-13** IUFRO World Congress, Brisbane, Australia. Stanturf to attend. <http://www.iufro2005.com>
- Aug/Sep** Society for Ecological Restoration 17th International Conference, Zaragoza, Spain.
- Nov 6-10** Soil Science Society of American Annual Meeting, Salt Lake City, UT

More Pictures :



Bolivia's Forest Management Project



Joe O'Brien and his crew in the Dominican Republic



SRS-4104 Project Leader's Report

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